

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1. (Currently Amended)

A storage system for protecting data stored on a volume of said storage system comprising:

a storage media upon which said volume is represented, said volume being made up of a plurality of areas to which data is able to be stored;

a disk controller which controls said storage system; and

a write once read many (WORM) configuration table having a plurality of entries which indicate by use of a next write pointer which of ~~a~~ the plurality of areas of said volume ~~is~~ are write protected and which of said plurality of areas are not write protected,

wherein said entries indicate a retention period for said data stored on said volume, and

wherein, when the retention period for the data stored on the volume expires, write protection for the data stored on the volume is turned off by updating said WORM configuration table.

2. (Currently Amended) A storage system according to claim 1, wherein said entries indicate whether said volume is WORM enabled, such that, when WORM enablement is turned on, writing of new data is inhibited to the areas of said volume that are write protected.

3. (Original) A storage system according to claim 1, wherein said entries indicate a size of each of said areas of said volume.

4. (Canceled)

5. (Currently Amended) A storage system according to claim 1, wherein said areas are each a block of storage of said volume identifiable by a block number, and
wherein the block numbers for said volume start at zero corresponding to a first storage location of said volume and ~~increases~~ increase in increments of one until the last storage location of said volume.

6. (Currently Amended) A storage system according to claim 5, wherein said next write pointer has a block number of a storage location at which data can be written, and

wherein said next write pointer indicates that data ~~can not~~ cannot be written to blocks having a block number less than the block number of said next write pointer.

7. (Currently Amended) A storage system according to claim ~~4~~ 5, wherein ~~said entries indicate a retention period of each of said areas when said next write pointer points to a block number larger than the last storage location of said volume, said retention period is periodically reduced by a unit of time until the retention period expires.~~

8. (Original) A storage system according to claim 1, further comprising: an internal clock which is used to measure said retention period.

9. (Currently Amended) A storage system according to claim 1, further comprising: a management console which allows for creating or deleting said entries in said WORM configuration table.

10. (Currently Amended) A storage system according to claim ~~4~~ 5, wherein said disk controller, in response to a write request from a host, checks if ~~an offset whether a disk block specified by said write request is larger less than an offset a disk block indicated by said next write pointer, and sends an error message to said host or ignores said write request;~~ if said ~~offset disk block~~ specified by said write request is ~~not larger smaller~~ than said ~~offset disk block~~ indicated by said next write pointer, ~~an error message to said host.~~

11. - 17. (Canceled)

18. (New) A storage system for enabling and disabling write protection of data, comprising:

a storage media upon which a volume is represented, said storage media being capable of storing data in a block-based format, wherein said volume is allocated consecutively numbered blocks, whereby the data is stored starting in a lowest numbered block and stored consecutively to a highest numbered block;

a disk controller which controls write requests to the storage media; and

a next write pointer maintained by said disk controller, said next write pointer pointing to a next block in said volume to which the data may be stored,

wherein any blocks numbered below the next block are write protected by said disk controller, while the next block and any blocks of said volume numbered greater than said next block are not write protected,

wherein when said next write pointer points to a block number larger than the highest numbered block of said volume, the disk controller periodically reduces a retention period for the data in the volume by a unit of time until the retention period expires, and

wherein when said retention period for the data in the volume expires, the disk controller ends write protection for the volume.

19. (New) The storage system according to claim 18, further including an internal clock that is used by said disk controller to measure said retention period.

20. (New) The storage system according to claim 18, further including a management console that allows for creating or deleting said entries in a WORM configuration table, said WORM configuration table indicating by use of the next-write pointer which portions of said volume are write protected.

21. (New) The storage system according to claim 18, wherein said disk controller, in response to a write request from a host, checks whether a disk block specified by said write request is less than the next disk block indicated by said next write pointer, and sends an error message to said host or ignores said write request if said disk block specified by said write request is smaller than said next disk block indicated by said next write pointer.

22. (New) A method of enabling and disabling write protection of data in a storage system, the method comprising:

providing a storage media upon which a volume is represented, said storage media being capable of storing data in a block-based format, wherein said volume is

allocated consecutively numbered blocks numbered from a first block to a maximum block;

providing indication that said volume is write-once-read-many (WORM) protected;

storing data to said blocks starting with said first block and storing to consecutively-numbered higher blocks;

providing a next-write pointer that points to a next block of said consecutively numbered blocks that has not yet been written to, wherein the data is able to be written to blocks greater than or equal to the next block, but cannot be written to blocks less than said next block, whereby said blocks less than said next block are write protected;

providing a retention period for said volume that sets forth an amount of time that the data is to be retained;

reducing the time remaining in said retention period periodically when the next-write pointer points to a block numbered higher than said maximum block;

disabling write protection for said volume when said retention period expires;
and

providing an indication that said volume is no longer WORM protected.

23. (New) The method according to claim 22, further including a step of:

providing an internal clock which is used to measure said retention period.

24. (New) The method according to claim 22, further including a step of:

while said volume is WORM protected, checking whether a block specified by a write request from a host is less than the next block pointed to by said next write pointer, and

sending an error message to said host or ignoring said write request if said block specified by said write request is smaller than said next block pointed to by said next write pointer.

25. (New) The method according to claim 24, further including a step of:

providing a management console that allows for creating or deleting entries in a write once read many (WORM) configuration table, said WORM configuration table indicating by use of the next-write pointer which portions of said volume are write protected.